

(19)



Europäisches Patentamt
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Office européen des brevets



(11) Publication number:

0 288 256 A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 88303543.8

(22) Date of filing: 20.04.88

(51) Int. Cl.⁵: **C07D 213/76**, C07D 213/36,
C07D 213/79, C07D 213/81,
C07D 401/14, C07D 405/14,
C07D 471/04, G01N 33/533,
G01N 33/58, //(C07D471/04,
221:00,221:00)

(30) Priority: 20.04.87 US 40385

(43) Date of publication of application:
26.10.88 Bulletin 88/43

(84) Designated Contracting States:
DE FR GB

(88) Date of deferred publication of the search report:
26.06.91 Bulletin 91/26

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(54) **Fluorescent labels.**

(57) There are described stable fluorescent labels comprising a complex of Eu^{+3} and a chelating agent comprising a nucleus which is a triplet sensitizer having a triplet energy greater than that of Eu^{+3} and at least two heteroatom-containing groups which form coordinate complexes with Eu^{+3} and a third heteroatom-containing group or heteroatom in or appended to the triplet sensitizer which chelating agents are polypyridine or phenanthroline compounds. Labeled physiologically active materials useful in specific binding assays such as labeled antigens, haptens, antibodies, hormones and the like comprising the stable fluorescent labels having physiologically active materials adsorbed or bonded thereto are also described.

EP 0 288 256 A3



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EUROPEAN SEARCH REPORT

Application Number

EP 88 30 3543

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|---|--|--|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int. Cl.4) |
| X | EP-A-0171978 (H.S.C. RESEARCH DEVELOPMENT CORPORATION) * page 23, line 25 - page 24, line 24; claims 1-10 * * examples 6-22 * | 1, 2, 4, 7-9 | C07D213/76 C07D213/36 C07D213/79 C07D213/81 C07D401/14 C07D405/14 C07D471/04 G01N33/533 G01N33/58 |
| A | EP-A-0068875 (EASTMAN KODAK CO.) * claims 1,2,4,5,10-13 * | 1-10 | /(C07D471/04, 221:00,221:00) |
| D | & US-A-4637988 | | |
| A | EP-A-0195413 (TRAVENOL-GENETECH DIAGNOSTICS) * claims 1-20 * | 1, 9 | |
| A | EP-A-0203047 (J. KANKARE ET AL.) * claims 1-9 * | 1, 9 | |
| | | | TECHNICAL FIELDS SEARCHED (Int. Cl.4) |
| | | | C07D213/00 C07D401/00 C07D405/00 C07D471/00 G01N33/00 |
| The present search report has been drawn up for all claims | | | |
| Place of search BERLIN | | Date of completion of the search 18 APRIL 1991 | Examiner VAN AMSTERDAM L. |
| CATEGORY OF CITED DOCUMENTS | | | |
| X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application I : document cited for other reasons A : member of the same patent family, corresponding document | |